

**ABSTRACT**

A membrane module for hydrogen separation includes a stack of flat membrane packs disposed adjacent one another so as not to exert a force on one another and a rotationally symmetrical pressure shell enclosing the stack of flat membrane packs. A feed space for a reformat gas is disposed between every two membrane packs in the stack. Each membrane pack has a pair of membrane assemblies and a support structure disposed therebetween and each membrane assembly includes a hydrogen-selective flat membrane supported by at least one membrane frame.